

# FLUKA and other generators in LArSoft

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# Use Case Scenarios for FLUKA

- FLUKA seems to do everything: particle transport, detector simulation, cosmic rays, medical physics, dosimetry
- written in FORTRAN
- has limited availability of source code
- how do we want to use:
  - generate neutrino fluxes
  - modeling detector response
  - scattering interactions
  - nucleon interaction



# FLUKA licensing

- licensing is rather complicated and very restrictive in terms of what is allowed
- <http://www.fluka.org/fluka.php?id=license>
- the pieces of FLUKA are not available with permission
- can explicitly have FLUKA write out text files for input into simulation



# alternative generators

- develop a text file based input to the detector simulation
- standardize format and then modify each generator to output that file format
- how to keep metadata for large scale generation?
- where to draw the line in modeling processes